REMARKS/ARGUMENTS

By the present amendment, claim 49 has been amended for purposes of clarity to remove a redundant phrase. No new issues are raised by this amendment.

In the Office Action, claims 49, 51, 52, 54, 96-98 and 115 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Seglin et al. US Patent No. 3,488,287 (Seglin et al. '287). This rejection is respectfully traversed.

Seglin et al. '287 discloses a method for producing a warm lather. The decomposition of hydrogen peroxide is used to provide heat and gas to foam a soap composition. The peroxide is delivered to a reaction chamber containing a catalyst where it is decomposed into water and oxygen gas. The decomposition products of hydrogen peroxide, namely, water, oxygen gas and heat, foam and warm the soap composition. Seglin et al. '287 discloses several methods for delivering hydrogen peroxide to the reaction chamber, including using a pressure release valve like in an aerosol-type dispenser. Seglin et al. '287 also discloses that the hydrogen peroxide may be mixed with a nominal amount of a low boiling point propellant to facilitate delivery of the peroxide to the reaction chamber. The lather that results from the combination of the decomposition products of hydrogen peroxide and the soap composition are delivered to the user through a tube. It is the increase in pressure resulting from the decomposition of hydrogen peroxide that forces the lather into the discharge tube of the container (Col. 2, ln. 62-66). Seglin et al. '287 also incidentally discloses that the parts of the container that come into contact with hydrogen peroxide should be made of suitable materials that do not decompose the peroxide and include plastic, plastic coated metal, stainless steel and aluminum.

Independent Claim 49 calls for a propellant mixed with the hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned.

Seglin et al. ' 287 does not disclose mixing a propellant with hydrogen peroxide to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned. The hydrogen peroxide in Seglin et al. ' 287 is delivered to a reaction chamber via a tube and an optional pressure valve, not onto a surface to be cleaned through a dispensing spray

outlet as set forth in Applicants' claim 49. Further, Seglin et al. ' 287 does not disclose storing hydrogen peroxide with a propellant under high pressure, such as is needed to spray the hydrogen peroxide onto a surface to be cleaned. Seglin et al. ' 287 specifically teaches away from storing hydrogen peroxide under high pressure such as is sufficient to spray the peroxide onto a surface to be cleaned. Seglin et al. ' 287 discloses that one of the advantages of their invention is that it does not require the use of a high pressure system (Col. 1, ln. 57-58).

In addition, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Seglin et al. ' 287 to mix a propellant with hydrogen peroxide to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned. Modifying the device of Seglin et al. ' 287 in such a way as to pressurize the hydrogen peroxide composition to a level sufficient to spray the composition onto a surface to be cleaned would yield a device incapable of performing its intended function, which is to produce a warm lather. In order for the Seglin et al. ' 287 dispenser to produce a warm lather, the hydrogen peroxide must be delivered to the reaction chamber at low pressure to react with the catalyst and exothermically decompose into water and gas. Without these decomposition products and heat, no warm lather would be produced and the soap composition would not be dispensed. Seglin et al. ' 287 explicitly states that it is the gas and foam produced from the decomposition of hydrogen peroxide that forces the lather out through of the dispensing tube (Col. 2, ln. 62-66). Therefore, Seglin et al. ' 287 neither expressly nor impliedly suggests a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned as set forth in Applicants' claim 49.

Applicants agree with the Examiner's statement that Seglin et al. ' 287 does not disclose a peroxide-soap in an aerosol-type dispenser wherein the inner surface is made of uncoated aluminum. Seglin et al. ' 287 incidentally discloses that the storage reservoirs and other parts of the device in contact with hydrogen peroxide should be constructed of materials that do not cause the hydrogen peroxide to decompose. Suitable materials include plastic, plastic coated metal, stainless steel and aluminum. Seglin et al. ' 287 does not disclose packaging the peroxide

in a bare aluminum container as required by Applicants' claim 49. Further, Seglin et al. ' 287, discloses using a pressure-release valve as in an aerosol-type container to deliver the peroxide to the reaction chamber in only two embodiments as illustrated in Figures 2 and 3. In the embodiment illustrated in Fig. 2, the disclosed concentration of hydrogen peroxide for use with the container of this embodiment is 10-90% (Col. 4, ln. 18). Seglin et al. ' 287 does not disclose what materials the container in Fig. 2 is made from. However, it is unlikely that the container of Fig. 2 would be made of uncoated aluminum, since the concentration of hydrogen peroxide disclosed by Seglin et al. ' 287 with regards to this embodiment would be too high for this type of container. In the embodiment illustrated in Fig. 3, which may also use a pressure-release valve as in an aerosol-type container, Seglin et al. ' 287 discloses that the container is made from a plastic material such as polyethylene or polypropylene (Col. 4, ln. 26-30).

Further, Applicants respectfully disagree with the Examiner's interpretation of Applicants' claim 49 and its dependent claims. In rejecting claim 49 and dependent claims 51, 52, 54, and 96-98 and 115, the Examiner states:

> "It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare an aerosol-type dispenser containing peroxide-soap composition in a dispenser made of aluminum because Seglin teaches in col. 2, line 69 to col 3., line 3 that the parts of the dispenser which are in contact with hydrogen peroxide should be constructed of materials which do not cause decomposition of hydrogen peroxide, and one suitable material includes aluminum."

Even if one could reasonably construe Seglin et al. ' 287 to disclose a peroxide-soap composition in an aerosol-type dispenser wherein the inner surface is made of uncoated aluminum, (which Applicants dispute), Seglin et al. ' 287 still does not meet the Applicants' claimed invention. Claim 49 further calls for a propellant mixed with the hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned. Seglin et al. ' 287 does not disclose or suggest this concept. The Seglin et al. ' 287 dispenser could not perform its intended function of producing a foam lather if the hydrogen peroxide was under high pressure such as is used to spray a composition onto a surface to be cleaned. The hydrogen peroxide of Seglin et al. ' 287 must enter the reaction

chamber at low enough pressure to allow it to react with a catalyst and decompose to a level sufficient to produce heat and gas to foam the soap composition. The required pressure for the Seglin et al. ' 287 device is low enough that simply inverting the device, as in the embodiment illustrated by Fig. 1, provides enough force to supply the reaction chamber with hydrogen peroxide. In addition, Seglin et al. ' 287 specifically discloses that the dispenser is designed to avoid the use of a high pressure system (Col. 1, ln. 57-58). Without the decomposition of hydrogen peroxide, there would be no gas to foam the soap composition and push the foam through the dispensing outlet. And there would be no heat to warm the soap.

It is therefore submitted that claim 49 and the claims dependent therefrom patentably distinguish over the Seglin et al. ' 287 patent. Thus, it is believed that claims 49, 51, 52, 54, and 96-98 and 115 patentably distinguish over Seglin et al. ' 287.

Claims 55 and 56 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Seglin et al. ' 287 as applied to the above claims and further in view of the Hart et al. U.S. Patent No. 3,970,584 (Hart et al. '584 patent). This rejection is respectfully traversed.

The alleged combination of Hart et al. '584 and Seglin et al. '287 is traversed. Hart et al. '584 relates to an aerosol package for dispensing a foam-forming emulsion mixed with a propellant system. There is no basis for the combination of Hart et al. '584 and Seglin et al. '287. Whereas Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition, Hart et al. '584 uses a propellant system. In addition, Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics (Co. 1, ln. 46-53). Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention (Col. 1, ln. 53-57).

Even if the combination were made, however untenably, the alleged combination of Hart et al. '584 patent and Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claims 55 and 56, which ultimately depend from claim 49, distinguish over the alleged combination of Hart et al. '584 patent and Seglin et al. '287 in the same manner as claim 49.

The Hart et al. '584 patent is cited to disclose a dip tube made of a thermoplastic material such as an olefin polymer. Adding a dip tube to the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Applicants' invention. The dip tube of Hart et al. '584 would simply deliver the hydrogen peroxide to the reaction chamber of Seglin et al. '287 where it would decompose. The deficiencies of Seglin et al. '287 as stated above would still apply.

Claim 57 has been rejected as being unpatentable over Seglin et al. '287 as applied against Claim 49 and further in view of the Miles U.S. Patent No. 3,722,753 (Miles '753). This rejection is respectfully traversed.

The alleged combination of Miles et al. '753 and Seglin et al. '287 is traversed. Miles et al. '753 discloses a pressurized aerosol container for dispensing fluids comprising a secondary chamber for modifying the temperature of the contents of the container prior to dispensing. The device of Miles et al. '753 is suitable for use with compositions that utilize pressurized propellant systems to produce a foam (Col. 8, ln. 55-61). There is no basis for the combination of Miles et al. '753 and Seglin et al. '287. Whereas Seglin et al. '287 uses the heat produced from the decomposition of hydrogen peroxide to modify the temperature of the foam, Miles et al. '753 uses heat from an external source, such as hot water, to heat the foam. In addition, the compositions disclosed in Miles et al. '753 are propellant-based systems that utilize the propellant to foam the soap. Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition. Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics (Co. 1, ln. 46-53). Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention (Col. 1, ln. 53-57).

Even if the combination were made, however untenably, the alleged combination of Miles et al. '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claim 57, which ultimately depends from

claim 49, distinguishes over the alleged combination of Miles et al. '753 patent and Seglin et al. '287 in the same manner as claim 49.

The Miles '753 patent is cited to disclose a valve made of nylon. The alleged combination of Miles '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 patent with respect to Claim 49. The inclusion of a nylon valve in the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Applicants' invention.

Claims 58 and 59 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Seglin et al. '287 and Miles '753 in view of the Barger et al. U.S. Patent No. 5,421,492 (Barger et al. '492). This rejection is respectfully traversed.

The alleged combination of Seglin et al. '287, Miles '753 and Barger et al. '492 is traversed. There is no basis for the combination. The arguments against the combination of Miles '753 and Seglin et al. '287 with regards to claim 57 above apply here as well. Barger et al. '492 relates to the dispensing of a controlled metered amount of a medical fluid from an aerosol container. The valve arrangement and the purpose of the Barger et al. '492 dispensing apparatus is remarkably different from that of both Miles '753 and Seglin et al. '287. Barger et al. '492 is not related to the dispensing of a foam composition as the Miles '753 and Seglin et al. '287 references are. It is not seen how the Barger et al. '492 disclosure is related in any significant way to the Miles ' 753 or the Seglin et al. '287 disclosures, other than the disclosure of dispensing of fluids.

In any case, even if the alleged combination were made, however untenably, the combination of Barger et al. '492 with Miles et al. '753 with Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '287 as set forth above with respect to claim 49. Therefore, claims 58 and 59, which ultimately depend from claim 49, distinguish over the alleged combination of Barger et al. '492 with Miles et al. '753 and Seglin et al. '287 in the same manner as claim 49.

Barger et al. '492 is cited to disclose a package wherein the valve contains a spring made from stainless steel. The alleged combination of Barger et al. '492 with Miles et al. '753 and

Seglin et al. '287 does not meet the deficiencies of the Seglin et al. '492 patent with respect to claim 49. Including a stainless steel spring in the dispensing valve of Seglin et al. '287 would result in the hydrogen peroxide being delivered to the reaction chamber for decomposition, producing gas and water for mixing with a soap composition. The incorporation of a stainless steel spring in the device of Seglin et al. '287 would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as set forth in claim 49.

In the Office Action, the Examiner asserts, without support, that it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the diameter of the orifice through routine experimentation for best results. This rejection is respectfully traversed. On the contrary, the valve orifice size is not a result of routine experimentation, but of describing an invention for delivering a cleaning composition comprising an active oxidizing agent to a surface to be cleaned and thus solving the problem discussed in the specification. This problem is not recognized in the cited references and thus would not be addressed by those working in the art with knowledge of the cited references. A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since the references cited by the Examiner do not recognize the problem the Applicants are addressing nor that the variable is a result-effective variable, the optimum size of the valve orifice as claimed by the Applicants can not be rejected as merely the result of routine experimentation.

Claim 94 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Seglin et al. '287 and Hart et al. '584 as applied to claim 55 and further in view of the Barger et al. U.S. Patent No. 5,921,447(Barger et al. '447). This rejection is respectfully traversed.

The alleged combination of Barger et al. '447 with Hart et al. '584 and Seglin et al. '287 is traversed. The Barger et al. '447 patent, like the Barger et al. '492 patent, relates to metered

dispensing of medical fluids from an aerosol container whereas Hart et al. '584 and Seglin et al. '287 relate to dispensing of foam materials. It is believed that these disclosures are unrelated. The arguments against the combination of Hart '584 and Seglin et al. '287 with regards to claims 55 and 56 above apply here as well. With regards to Barger et al. '447, Barger et al. '447 relates to the dispensing of a controlled metered amount of a medical fluid from an aerosol container. The valve arrangement and the purpose of the Barger et al. '447 dispensing apparatus are remarkably different from that of both Hart '584 and Seglin et al. '287. Barger et al. '492 is not related to the dispensing of a foam composition as the Hart '584 and Seglin et al. '287 references are. It is not seen how the Barger et al. '447 disclosure is related in any significant way to the Hart ' 584 and Seglin et al. '287 disclosures, other than the disclosure of dispensing of fluids.

However, even if the alleged combination of Seglin et al. '287, Hart et al. '584, and Barger et al. '447 were to be combined, however untenably, it still would not meet Applicants' claimed invention. At best, the alleged combination of these references would simply add a gasket made of ethylene propylene diene terpolymer to the alleged combination of Seglin et al. ' 287 and Hart et al. '584. This combination would still only result in delivery of hydrogen peroxide under low pressure sufficient to allow the peroxide to decompose into gas and water to the reaction chamber of Seglin et al. '287. The combination would still not produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as set forth in Applicants' claim 49. This alleged combination would not meet the deficiencies of claim 49 from which claim 94 ultimately depends for all of the same reasons as set forth above with respect to the distinction of claim 49 over the Seglin et al. '287 patent.

Claim 95 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Seglin as applied to claim 49 and further in view of the Spitzer et al. U.S. Patent No. 4,019,657 (Spitzer et al. '657). This rejection is respectfully traversed.

The alleged combination of Seglin et al. '287 with Spitzer et al. '657 is traversed. Spitzer et al. '657 discloses foaming an aerosol composition to produce a fine spray that requires less propellant than traditional aerosol containers. There is no basis for the combination of

Spitzer et al. '657 with Seglin et al. '287. Whereas Seglin et al. '287 uses the decomposition products of hydrogen peroxide to foam the soap composition, Spitzer et al. '657 uses a propellant to foam the soap. In addition, Seglin et al. '287 teaches away from this combination by disclosing that lathers formed from propellant systems have undesirable characteristics (Co. 1, ln. 46-53). Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention (Col. 1, ln. 53-57). Therefore it is believed that the Spitzer et al. '657 reference cannot be tenably combined with the Seglin et al. '287 reference.

However, even if the alleged combination is made, however untenably, the combination still would not meet Applicants' claimed invention. Claim 95 depends from claim 49 and defines over the alleged combination of Spitzer et al. '657 and Seglin et al. '287 in the same manner as claim 49. The alleged combination of these references would simply provide an anodized aluminum container for the peroxide containing container of Seglin et al. The combination does not overcome the inability of the device of Seglin et al. ' 287 to produce a device comprising a propellant mixed with a hydrogen peroxide composition to pressurize the oxidizing composition to a level sufficient to spray the peroxide onto a surface to be cleaned, as claimed in the Applicants' invention.

Claim 99 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over the Siegel et al. '287 reference as applied against claim 49 and further in view of the Lauwers et al. U.S. Patent No. 6,021,926 (Lauwers et al. '926). This rejection is respectfully traversed.

The alleged combination of Lauwers et al. '926 and Seglin et al. '287 is traversed. These disclosures relate to remarkably different aerosol packages. Whereas the Lauwers et al. '926 reference relates to an aerosol package which has a relatively high pressure, the Seglin et al. '287 reference relates to a low-pressure container which forms foam and does not have a dispensing spray outlet for dispensing controlled amounts of fluid under pressure from the pressure chamber onto a surface to be cleaned. Lauwers et al. '926 discloses a propellant-based system for foaming the composition, whereas Seglin et al. '287 uses gas produced from the decomposition of hydrogen peroxide to foam the soap composition. Seglin et al. '287 teaches away from this

combination by disclosing that lathers formed from propellant systems have undesirable characteristics (Co. 1, ln. 46-53). Further, Seglin et al. '287 specifically discloses that the deficiencies of propellant system-based foams create the need for their invention (Col. 1, ln. 53-57). Therefore it is believed that the Lauwers et al. '926 reference cannot be tenably combined with the Seglin et al. '287 reference.

Even if the alleged combination of Lauwers et al. '926 and Seglin et al. '287 were made, however untenably, the combination would still not the Applicants' claimed invention. As noted above, it would not have been obvious to modify the device of Seglin et al. ' 287 to store the hydrogen peroxide at a pressure sufficiently high enough to allow it to be sprayed onto a surface to be cleaned. The device of Seglin et al. ' 287 could not produce a foam lather if the hydrogen peroxide was under high pressure. The hydrogen peroxide must enter the reaction chamber at low enough pressure to allow it react with a catalyst and decompose to a level sufficient to produce heat and gas to foam the soap composition. The required pressure for the Seglin et al. ' 287 device is low enough that simply inverting the device, as in the embodiment illustrated by Fig. 1, provides enough force to supply the reaction chamber with hydrogen peroxide. In addition, Seglin et al. ' 287 specifically discloses that the device is designed to avoid the use of a high pressure system (Col. 1, ln. 57-58). Therefore, it would not be appropriate to pressurize the Seglin et al. '287 containers with the pressures disclosed in Lauwers et al. '926 and the alleged combination of Seglin et al. ' 287 with Lauwers et al. '926 would not be an obvious combination of references.

In view of the foregoing remarks and amendments, it is submitted that claim 49 and all of the claims dependent therefrom patently define over the prior art references. Early notification of allowability is respectfully requested.

Respectfully submitted,

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